

Practice: 645 - Upland Wildlife Habitat Management**Scenario: #4 - Downed Wildlife Tree Structures****Scenario Description:**

Downed tree structures will be created to provide shrubby/woody escape cover for wildlife. Existing sod will be killed prior to placement of tree structures. Felling of select trees and placement in selected locations to provide wildlife cover. Minimum 30' x 50' area for structure covered by interlocking limbs of trees at least 12" in diameter. Payment includes tree felling and placement and herbicide application to kill existing sod. Note that it takes three 1500 square foot areas to equal 0.1 acre. Facilitating practices may include but not limited to: Wetland Creation (658), Wetland Restoration (657), Wetland Enhancement (659), Early Successional Habitat Management/Development (647), Prescribed Burning (338), Restoration and Management of Rare and Declining Habitats (643), and Conservation Cover (327).

Before Situation:

A 40 acre operation managing for quail and other small game habitat. Shrubby/woody escape cover is often the missing habitat component for bobwhite quail and other small game in fields managed for upland wildlife wildlife.

After Situation:

The installation of a downed tree structure enhances the overall habitat needs of quail and other small game species. These structures/features enhance habitat and improve species survivability.

Scenario Feature Measure: area covered by structures

Scenario Unit: Each

Scenario Typical Size: 3

Scenario Cost: \$800.59

Scenario Cost/Unit: \$266.86

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Tractor, agricultural, 120 HP	962	Agricultural tractor with horsepower range of 90 to 140. Equipment and power unit costs. Labor not included.	Hour	\$55.27	6	\$331.62
Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$6.37	9	\$57.33
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$37.62	2	\$75.24
Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.88	0.1	\$0.59
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.06	6	\$132.36
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	9	\$201.87
Materials						
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	0.1	\$1.58

Practice: 645 - Upland Wildlife Habitat Management**Scenario: #5 - Edgefeathering, heavy****Scenario Description:**

Implementing edge feathering techniques consisting of tree cutting and clipping using a tractor and chainsaw, to create dense woody cover and a transitional area between a timbered edge and other land uses such as cropland, pasture, or idle land and forestland to support early successional wildlife species. The edge feathering will extend at least 30' wide, measured from the outside tree trunk, and at least 50' long -- resulting in a minimum area of 1500 square feet covered by interlocking woody branches. Cut stumps will be treated with brush herbicide. Existing sod must be killed prior to the edge feathering operation. Payment includes tree felling and herbicide application to kill existing sod. Facilitating practices may include but not limited to: Wetland Creation (658), Wetland Restoration (657), Wetland Enhancement (659), Early Successional Habitat Management/Development (647), Prescribed Burning (338), Restoration and Management of Rare and Declining Habitats (643), and Conservation Cover (327).

Before Situation:

A 80 acre operation consisting of forested land adjacent to cropland with a hard edge. A transitional area consisting of shrubs, forbs, vines, and other herbaceous vegetation is needed to provide cover for many wildlife species including rabbits, bobwhite quail, birds, and other upland wildlife species.

After Situation:

Installation of edge feathering enhances the overall habitat needs of quail and other small game species. These structures/features enhance habitat and improve species survivability.

Scenario Feature Measure: area covered by edgefeathering

Scenario Unit: Acres

Scenario Typical Size: 1

Scenario Cost: \$945.51

Scenario Cost/Unit: \$945.51

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Tractor, agricultural, 120 HP	962	Agricultural tractor with horsepower range of 90 to 140. Equipment and power unit costs. Labor not included.	Hour	\$55.27	6	\$331.62
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$37.62	2	\$75.24
Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$6.37	12	\$76.44
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.06	6	\$132.36
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	14	\$314.02
Materials						
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	1	\$15.83

Practice: 645 - Upland Wildlife Habitat Management**Scenario: #7 - Permanent Forest Opening****Scenario Description:**

Permanent forest openings will be created by removing ALL trees and stumps AND going from an existing basal area of 60 sq ft/acre or more to a basal area of 0. This practice will create a minimum of 1/4 ac to a maximum of 3 acre clearing within a stand of timber. Openings will be created using heavy equipment and chainsaws. Openings serve as a valuable source for wildlife including brood habitat for forest birds as well as browse for deer and turkey. Creation of forest openings improves habitat for forest edge species, and these areas also serve as sunning and singing grounds for young birds. Facilitating practices may include but not limited to: Wetland Creation (658), Wetland Restoration (657), Wetland Enhancement (659), Early Successional Habitat Management/Development (647), Prescribed Burning (338), Restoration and Management of Rare and Declining Habitats (643), and Conservation Cover (327).

Before Situation:

A 100 acre woodlot lacking diversity in stand structure resulting in limited habitat for forest edge wildlife species. Resource concerns include inadequate species composition, food, and nesting areas. Consideration should be given to avoid placing openings on erodible slopes or soil types.

After Situation:

Installation of a permanent opening brings the identified deficient habitat limiting factors up to planning criteria.

Scenario Feature Measure: area of opening

Scenario Unit: Acres

Scenario Typical Size: 2

Scenario Cost: \$3,867.86

Scenario Cost/Unit: \$1,933.93

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Dozer, 200 HP	928	Track mounted Dozer with horsepower range of 160 to 250. Equipment and power unit costs. Labor not included.	Hour	\$188.71	15	\$2,830.65
Labor						
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$27.84	15	\$417.60
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	4	\$89.72
Materials						
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	2	\$31.66
Mobilization						
Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$498.23	1	\$498.23

Practice: 645 - Upland Wildlife Habitat Management**Scenario: #8 - Glade/Savanna/Open Woodland Restoration, light****Scenario Description:**

Removing or reducing tree canopy and utilizing chemical treatment (except for non-sprouting woody species) to promote herbaceous growth or early woody succession to benefit wildlife habitat. Designed for glade savanna restoration where Basal Area removal is >20-40 square feet per acre, or up to 200 stems per acre. This practice is intended to restore and manage for associated wildlife species that benefit from habitats such as savannas and glades. Facilitating practices may include but not limited to: Early Successional Habitat Management/Development (647), Prescribed Burning (338), Restoration and Management of Rare and Declining Habitats (643), and Conservation Cover (327).

Before Situation:

A 100 acre stand of trees that is even aged and lacks structural diversity. The understory has a minimal amount of herbaceous and early woody successional vegetation. Wildlife food, cover, and shelter are lacking, and woody cover control is needed to manage for associated wildlife species that benefit from habitats such as savannas and glades.

After Situation:

The Glade or Savanna habitat is restored and flora and fauna that depend on the glade or savannah habitat flourish.

Scenario Feature Measure: area of opening

Scenario Unit: Acres

Scenario Typical Size: 2

Scenario Cost: \$494.18

Scenario Cost/Unit: \$247.09

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$6.37	12	\$76.44
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	14	\$314.02
Materials						
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	2	\$31.66
Mobilization						
Mobilization, very small equipment	1137	Equipment that is small enough to be transported by a pick-up truck with typical weights less than 3,500 pounds. Can be multiple pieces of equipment if all hauled simultaneously.	Each	\$72.06	1	\$72.06

Practice: 645 - Upland Wildlife Habitat Management**Scenario: #9 - Glade/Savanna/Open Woodland Restoration, medium****Scenario Description:**

Removing or reducing tree canopy and utilizing chemical treatment (except for non-sprouting woody species) to promote herbaceous growth or early woody succession to benefit wildlife habitat. Designed for glade savanna restoration where Basal Area removal is >40-60 square feet per acre, or 201-400 stems per acre. This practice is intended to restore and manage for associated wildlife species that benefit from habitats such as savannas and glades. Facilitating practices may include but not limited to: Early Successional Habitat Management/Development (647), Prescribed Burning (338), Restoration and Management of Rare and Declining Habitats (643), and Conservation Cover (327).

Before Situation:

A 100 acre stand of trees that is even aged and lacks structural diversity. The understory has a minimal amount of herbaceous and early woody successional vegetation. Wildlife food, cover, and shelter are lacking, and woody cover control is needed to manage for associated wildlife species that benefit from habitats such as savannas and glades.

After Situation:

The Glade or Savanna habitat is restored and flora and fauna that depend on the glade or savannah habitat flourish.

Scenario Feature Measure: area of opening

Scenario Unit: Acres

Scenario Typical Size: 2

Scenario Cost: \$689.41

Scenario Cost/Unit: \$344.71

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$6.37	18	\$114.66
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	21	\$471.03
Materials						
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	2	\$31.66
Mobilization						
Mobilization, very small equipment	1137	Equipment that is small enough to be transported by a pick-up truck with typical weights less than 3,500 pounds. Can be multiple pieces of equipment if all hauled simultaneously.	Each	\$72.06	1	\$72.06

Practice: 645 - Upland Wildlife Habitat Management**Scenario: #10 - Glade/Savanna/Open Woodland Restoration, heavy****Scenario Description:**

Removing or reducing tree canopy and utilizing chemical treatment (except for non-sprouting woody species) to promote herbaceous growth or early woody succession to benefit wildlife habitat. Designed for glade savanna restoration where Basal Area removal exceeds >60 square feet per acre, or more than 400 stems per acre. This practice is intended to restore and manage for associated wildlife species that benefit from habitats such as savannas and glades. Facilitating practices may include but not limited to: Early Successional Habitat Management/Development (647), Prescribed Burning (338), Restoration and Management of Rare and Declining Habitats (643), and Conservation Cover (327).

Before Situation:

A 100 acre stand of trees that is even aged and lacks structural diversity. The understory has a minimal amount of herbaceous and early woody successional vegetation. Wildlife food, cover, and shelter are lacking, and woody cover control is needed to manage for associated wildlife species that benefit from habitats such as savannas and glades.

After Situation:

The Glade or Savanna habitat is restored and flora and fauna that depend on the glade or savannah habitat flourish.

Scenario Feature Measure: area of opening

Scenario Unit: Acres

Scenario Typical Size: 2

Scenario Cost: \$884.64

Scenario Cost/Unit: \$442.32

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$6.37	24	\$152.88
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	28	\$628.04
Materials						
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	2	\$31.66
Mobilization						
Mobilization, very small equipment	1137	Equipment that is small enough to be transported by a pick-up truck with typical weights less than 3,500 pounds. Can be multiple pieces of equipment if all hauled simultaneously.	Each	\$72.06	1	\$72.06

Practice: 645 - Upland Wildlife Habitat Management**Scenario: #11 - Wildlife Watering****Scenario Description:**

Establishment of a topographic feature on the landscape consisting of a small dam and pool or small excavated dugout that will hold water to provide a source of drinking water for wildlife, and habitat for reptiles and amphibians. Payment includes the equipment and labor associated with establishing the watering feature.

Before Situation:

This practice will be installed on any area where drinking water for wildlife is inadequate, or a water feature will improve habitat and existence of reptiles and amphibians in an identified area. The resource concerns to be addressed by this practice are inadequate water supply and moist habitat for wildlife that results in poor animal health and populations.

After Situation:

This practice consists of an excavated pool to collect water for wildlife to access and drink from safely. Excavated pools are typically 1000 ft² and 3 feet deep in center with 4:1 side slopes around edge. Associated practices: Critical Area Planting (342), Conservation Cover (327)

Scenario Feature Measure: Each watering feature

Scenario Unit: Each

Scenario Typical Size: 1

Scenario Cost: \$881.67

Scenario Cost/Unit: \$881.67

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Dozer, 80 HP	929	Track mounted Dozer with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$68.02	4	\$272.08
Labor						
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$27.84	4	\$111.36
Mobilization						
Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$498.23	1	\$498.23